



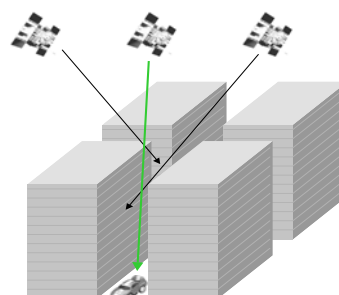
AssistNow Online and Offline

Free Assisted GPS (A-GPS) Services

The Challenge of Stand-alone GPS

GPS users expect instant position information. With standard GPS this is not always possible because at least four satellites must transmit their precise orbital position data, called Ephemeris, to the GPS receiver. Under adverse signal conditions, data downloads from the satellites to the receiver can take minutes, hours or even fail altogether.

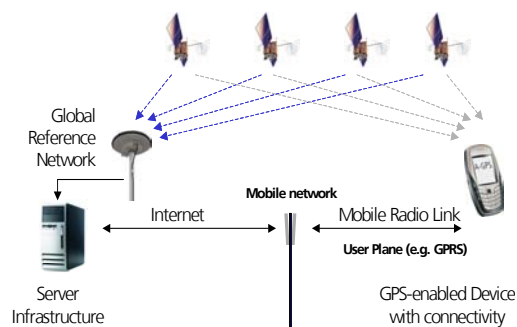
Assisted GPS (A-GPS) boosts acquisition performance by providing data such as Ephemeris, Almanac, accurate time and satellite status to the GPS receiver via mobile networks or the Internet. The aiding data enables the receiver to compute a position within seconds, even under poor signal conditions.



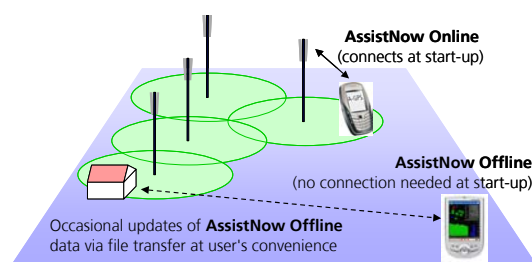
AssistNow A-GPS

AssistNow is the free, patented, end-to-end A-GPS service for u-blox OEM customers and their end users. This service is suitable for a wide spectrum of end products with or without connectivity. AssistNow is available in Online and Offline versions, which can either be used alone or in combination. AssistNow requires no additional hardware and generates virtually no CPU load. The system is very easy to integrate and can be installed and operational within a day.

With **AssistNow Online**, a GPS device with mobile network connectivity accesses and downloads assistance data from our Global Reference Network of GPS receivers at system start-up.

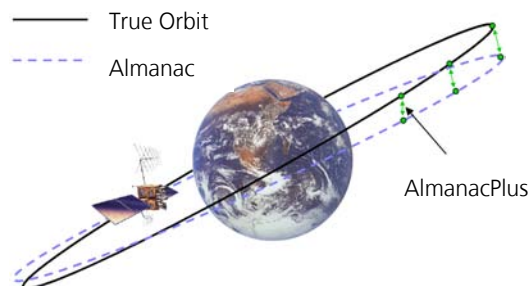


Employing User Plane communication and open standards such as TCP/IP, AssistNow Online works on all standard mobile communication networks that support Internet access, including GPRS, UMTS and Wireless LAN. No special arrangements with mobile network operators are needed to enable AssistNow Online, making this solution network operator independent and globally available. u-blox only sends ephemeris data for those satellites currently visible to the mobile device requesting the data, thus minimizing the amount of data transferred.



With **AssistNow Offline**, users download AlmanacPlus® Differential Almanac Correction Data from the Internet at their convenience. The service requires no connectivity at system start-up and enables a position fix within seconds, even when no mobile network is available.

Users can download AlmanacPlus files anytime they have an Internet connection, for example at home, in the office or through a wireless network such as GPRS, UMTS or a Wireless LAN. The correction data is then downloaded to the mobile terminal via TCP/IP, serial port, memory card, etc, and can either be stored in the GPS receiver's Flash EPROM (if available) or in the memory of the application processor.



u-blox provides AlmanacPlus data files with corrections valid from 1 to 14 days. The size of these files increases with the length of the prediction period. Positioning accuracy decreases with the length of the correction file duration, with 1-3 day files providing relatively high accuracy and 10-14 day files progressively less accuracy. Regular updates help to ensure a high level of position accuracy.

*your position
is our focus*



AssistNow System Framework

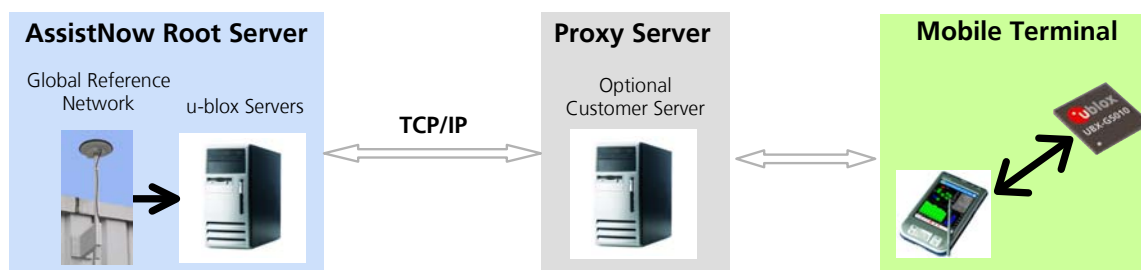
The AssistNow framework consists of the the following components:

The **AssistNow Global Reference Network** is a worldwide network of GPS receivers, which gather satellite information such as Ephemeris, Almanac, satellite health and status and forward it to the AssistNow Root Server.

The **AssistNow Root Server** collects the data from the Global Reference Network, calculates the assistance data and handles data requests originating from mobile terminals or other devices. On request, the Root Server generates the data packets and transmits them either directly to the client's terminal, mobile device or proxy server.

With the optional **Proxy Server** arrangement, individual requests from mobile terminals are locally handled by the customer's proxy server. This server receives regular aiding data information updates from the u-blox AssistNow Root Server, ensuring that up-to-date information is available to user terminals when requested. This solution is totally scalable and gives the customer full control and data privacy. Customers can use their communication link of choice for the communication between the user terminals and the server.

In the **Mobile Terminal** microcontroller resides a very simple software. This provides communication with the Root or Proxy Server over a network and transfers data to the GPS receiver via UART, USB, SPI or I²C interfaces.



Benefits of AssistNow

- Free for u-blox customers and their end users
- Fast Time To First Fix, even under poor signal conditions
- Global coverage
- Network operator independent
- Available with all u-blox 5 and selected ANTARIS 4 products
- Easy to integrate - Try it today!

	AssistNow Online	AssistNow Offline
Data downloads	@ every start-up	1x / 14 days
Data source at start-up	server	local memory
Usability	2 - 4 hrs	14 days offline
Data download size	1 - 3 kB	10 kB / 1 day 90 kB / 14 days
Achievable TTFF	As low as 1s	As low as 5s

Ordering Information

Please contact u-blox to obtain access to the free AssistNow service.

This service is available to u-blox OEM customers.